

symbol was intended is self-evident from the context of each of the instances, and in any event a degree symbol is clearly supported elsewhere in the specification. Pages 11 and 12 are included herewith in the form of separate sheets, both “clean” and “marked up.”

In the Claims:

Please amend claim 11 as follows (note – separate sheets identifying all the claims after the amendment are also attached):

11. (Amended) Turntable apparatus of claim 8 wherein said gerotor guide has an internal profile which is an expansion by an expansion factor  $gR$  of a profile which satisfies the hypocycloid parametric equations  $x = 0.25R \cdot \cos\theta + 0.75R \cdot \cos\theta/3$  and  $y = 0.25R \cdot \sin\theta - 0.75R \cdot \sin\theta/3$  where  $R$  is the radius of the large circle of the hypocycloid and  $g$  is a number from 0.1 to 0.5, and wherein  $R$  is ~~0.6184W~~  $0.6184W/2$ .

It is clear the original expression, 0.6184W, was used inadvertently, as  $R$  is already defined in the claim as the radius of the large circle. As the specification makes abundantly clear, the “large circle” used in the hypocycloid function is to have a diameter of 0.6184 times the effective width ( $W$ ) of the turntable. The formula used in claim 11 and elsewhere in the claims defines  $R$  as the radius of the large circle. The amendment above changes the multiple of  $W$  to the appropriate value for the radius, namely half the diameter, i.e. half the number in original claim 11. See page 4, lines 4-5 and 12-13, page 9, lines 16-17, page 10, lines 21-24, and page 15, line 18. A similar clarification is proposed for claim 17 below.

Please amend claim 17:

17. (Amended) A turntable of claim 12 including a gerotor guide, said gerotor guide including a guide profile determined by expanding the path followed by a point on a **circle having a diameter** 0.4638 of the width of said Reuleaux triangle as it turns in a hypocycloid relation to a circle **having a diameter** 0.6184 of the width of said Reuleaux triangle, said circle being centered in said gerotor guide, said gerotor being set in said gerotor guide to guide the rotation of said turntable.

This amendment is submitted simply to clarify that the circles' properties referred to are diameters. Again, this is abundantly clear in the specification.

Please add the following claims:

21. (new) A turntable in the shape of a Reuleaux triangle and having a gerotor attached thereto, said gerotor having three substantially identical lobes.
22. (new) A turntable of claim 21 wherein said gerotor has a perimeter determined by an expansion of the path defined by the parametric equations  $x = r/3 \cos \theta + 2r/3 \cos \theta/2$  and  $y = r/3 \sin \theta - 2r \sin \theta - 2r/3 \sin \theta/2$ , where  $r$  is 0.2319 times the width of said Reuleaux triangle.
23. (new) A turntable of claim 22 wherein the expansion is by a dimension  $g$  substantially uniformly around the perimeter of said path, and wherein  $g$  is from about 0.1 times  $r$  to about  $0.67r$ .

Separate sheets are appended showing the status of the claims after the above amendments.

Respectfully submitted,



William L. Kraye

Certification under 37CFR1.10  
(Express Mail)

Express Mail Mailing Number: **ER 489534248 US**  
Date of Deposit: **April 9, 2004**

I hereby certify that the application/correspondence attached hereto is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37CFR1.10 on the date indicated above and is addressed to Commissioner for Patents, PO Box 1450, Alexandria VA 22313-1450.



Signature of person mailing correspondence

William L. Kraye

Person Mailing Correspondence

## Claims

1. (original) A gerotor guide comprising a gerotor housing having an internal gerotor guide profile expanded by a dimension  $g$  from a geometric figure satisfying the hypocycloid parametric equations  $x = 0.25R \cos\theta + 0.75R \cdot \cos\theta/3$  and  $y = 0.25R \cdot \sin\theta - 0.75R \cdot \sin\theta/3$  where  $g$  is a number from  $0.1R$  to  $0.5R$  and  $R$  is the radius of the large circle in the hypocycloid.
2. (original) A support for a substantially horizontal storage unit comprising a gerotor guide of claim 1 installed on a  $90^\circ$  corner of a substantially horizontal surface.
3. (original) A support of claim 2 wherein said horizontal surface is a countertop.
4. (original) A support of claim 2 wherein said horizontal surface is in a cabinet.
5. (original) A gerotor guide of claim 1 wherein said housing includes a substantially planar bearing.
6. (original) Turntable apparatus comprising a gerotor guide of claim 1, a gerotor characterized by an external profile for rotation within said gerotor guide profile, and a turntable attached to said gerotor.
7. (original) Turntable apparatus of claim 6 wherein said turntable is in the shape of a Reuleaux triangle having a width  $W$ , the external profile of said gerotor has three lobes and three concave edges, and the centers of said gerotor and said gerotor guide are  $0.0773W$  apart.
8. (original) Turntable apparatus comprising (a) a turntable in the shape of a Reuleaux triangle, said turntable having three apexes, a top and an underside, and having a width  $W$  (b) a gerotor fixed to the underside of said turntable, said gerotor having an underside, and (c) a gerotor guide, said gerotor being situated within said gerotor guide so that the center of said gerotor revolves around the center of said gerotor guide as it is moved within said gerotor guide, said centers being a distance  $0.0773W$  apart, whereby said apexes of said turntable describe a substantially square area as they are turned, said turntable apparatus including at least one substantially planar bearing surface for forming a bearing interface.
9. (original) Turntable apparatus of claim 8 wherein said at least one substantially planar bearing surface forms a bearing interface between said underside of said gerotor and said gerotor guide.

10. (original) Turntable apparatus of claim 8 wherein said at least one substantially planar bearing surface forms a bearing interface between said underside of said turntable and said gerotor guide.
11. (currently amended) Turntable apparatus of claim 8 wherein said gerotor guide has an internal profile which is an expansion by an expansion factor  $gR$  of a profile which satisfies the hypocycloid parametric equations  $x = 0.25R \cdot \cos\theta + 0.75R \cdot \cos\theta/3$  and  $y = 0.25R \cdot \sin\theta - 0.75R \cdot \sin\theta/3$  where  $R$  is the radius of the large circle of the hypocycloid and  $g$  is a number from 0.1 to 0.5, and wherein  $R$  is ~~0.6184W~~ 0.6184W/2.
12. (original) A turntable for manual turning, said turntable being in the shape of a Reuleaux triangle and having a gerotor attached thereto, at least one of said turntable and said gerotor having a substantially planar bearing surface thereon.
13. (original) A turntable of claim 12 wherein said substantially planar bearing surface is on the underside of said turntable.
14. (original) A turntable of claim 12 wherein said substantially planar bearing surface is on the underside of said gerotor.
15. (original) A turntable of claim 12 wherein said gerotor has three substantially identical lobes.
16. (original) A turntable of claim 12 made from countertop material.
17. (currently amended) A turntable of claim 12 including a gerotor guide, said gerotor guide including a guide profile determined by expanding the path followed by a point on a circle having a diameter 0.4638 of the width of said Reuleaux triangle as it turns in a hypocycloid relation to a circle having a diameter 0.6184 of the width of said Reuleaux triangle, said circle being centered in said gerotor guide, said gerotor being set in said gerotor guide to guide the rotation of said turntable.
18. (original) Turntable apparatus comprising (a) a turntable of claim 12 including a gerotor guide having an internal guide profile which is expanded uniformly by a dimension  $g$  around the periphery of a figure satisfying the parametric hypocycloid equations  $x = 0.25R \cdot \cos\theta + 0.75R \cdot \cos\theta/3$  and  $y = 0.25R \cdot \sin\theta - 0.75R \cdot \sin\theta/3$  where  $R$  is the radius of the large circle of the hypocycloid and  $g$  is a value from  $0.1R$  to  $0.5R$ , and wherein said gerotor has a perimeter which is expanded uniformly by said dimension  $g$  around the periphery of a figure satisfying the parametric hypocycloid equations  $x = r/3 \cos \theta + 2r/3 \cos \theta/2$  and  $y = r/3 \sin \theta - 2r/3 \sin \theta/2$ , where  $r$  is  $0.75R$ .
19. (original) Turntable apparatus of claim 18 wherein at least one of said gerotor and said gerotor guide has a substantially planar bearing surface.

20. (original) Turntable apparatus of claim 19 wherein said gerotor and said gerotor guide have interfacing substantially planar bearing surfaces.
21. (new) A turntable in the shape of a Reuleaux triangle and having a gerotor attached thereto, said gerotor having three substantially identical lobes.
22. (new) A turntable of claim 21 wherein said gerotor has a perimeter determined by an expansion of the path defined by the parametric equations  $x = r/3 \cos \theta + 2r/3 \cos \theta/2$  and  $y = r/3 \sin \theta - 2r \sin \theta - 2r/3 \sin \theta/2$ , where  $r$  is 0.2319 times the width of said Reuleaux triangle.
23. (new) A turntable of claim 22 wherein the expansion is by a dimension  $g$  substantially uniformly around the perimeter of said path, and wherein  $g$  is from about 0.1 times  $r$  to about 0.67 $r$ .